

EXHIBIT 5

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

Headwater Research LLC,

Plaintiff,

vs.

Samsung Electronics Co., Ltd., Samsung
Electronics America, Inc.,

Defendants.

CASE NO. 6:23-CV-00103-JRG-RSP

**PLAINTIFF HEADWATER
RESEARCH LLC'S DISCLOSURE
OF ASSERTED CLAIMS AND
INFRINGEMENT CONTENTIONS**

JURY DEMANDED

**PLAINTIFF HEADWATER RESEARCH LLC'S DISCLOSURE OF
ASSERTED CLAIMS AND INFRINGEMENT CONTENTIONS**

Pursuant to P.R. 3-1 and P.R. 3-2, patent owner Headwater Research LLC ("Headwater") hereby provides its disclosure of asserted claims and infringement contentions and its accompanying document production. This disclosure is based on the information available to Headwater as of the date of this disclosure, before Headwater has received any discovery on the design or operation of the defendants' products. Headwater reserves the right to amend this disclosure to the full extent permitted under the court's rules and orders.

**P.R. 3-1: DISCLOSURE OF ASSERTED CLAIMS AND INFRINGEMENT
CONTENTIONS**

P.R. 3-1(A): ASSERTED CLAIMS

Headwater asserts that defendants Samsung Electronics America, Inc. and Samsung Electronics Co., Ltd. (collectively "Samsung") infringe one or more of the following claims, directly, by inducement, by contributory infringement:

<i>U.S. Patent No.</i>	<i>Asserted Claims</i>
8,406,733	1-5, 6-14, 19, 21-24, 26, 29, 30
9,198,117	1, 2, 4 -6, 9-14, 16-18
9,615,192	1-9, 11-13, 15

Collectively, these three patents are referred to herein as the Asserted Patents, and these claims as the Asserted Claims.

P.R. 3-1(B): ACCUSED INSTRUMENTALITIES OF WHICH HEADWATER IS AWARE

In this section, Headwater provides lists of accused products that Headwater is aware of infringing based upon information presently available to it and its investigation to date. Headwater's infringement claims are not limited to these listed products and specifically extend to all products and apparatuses of Samsung similar to the listed products that include the claimed elements. Unless otherwise stated, Headwater's infringement assertions apply to all variations, versions, editions, and applications of each of the listed products.

U.S. PATENT NO. 8,406,733

Headwater accuses the following Samsung products which implement Samsung Knox, Tizen, and/or push messaging functionality (e.g., communicating with Google's Firebase Cloud Messaging service, Samsung's Push Service, Knox, or Tizen functionality) of infringing each of the Asserted Claims of the '733 patent:

Samsung phones, tablets, and devices made, used, sold, offered for sale, or imported within six years of the filing of the date of the lawsuit comprising Knox functionality, Tizen functionality, and/or push messaging functionality, including but not limited to the following: Galaxy S II Plus, Galaxy Grand, Galaxy Young, Galaxy Xcover 2, Galaxy S4, Galaxy Fame, Galaxy Mega, Galaxy Win, Galaxy Y Plus, Galaxy Core, Galaxy Star, Galaxy Pocket Neo, Galaxy Ace 3, Galaxy S4 Zoom, Galaxy S4 Active, Galaxy S4 Mini, Galaxy Gear, Galaxy Note 3, Galaxy Core Plus, Galaxy Light, Galaxy Fame Lite, Galaxy Trend Lite, Galaxy Round, Galaxy Express 2, Galaxy J, Galaxy Star Pro, Galaxy Grand 2, Galaxy Trend Plus, Galaxy S Duos 2, Galaxy J, Galaxy Win Pro (SM-

G3812), Galaxy Grand Lite, Galaxy Grand Neo, Galaxy Note 3 Neo, Galaxy Win 2, Galaxy S3 Neo, Galaxy S5, Galaxy Ace Style, Galaxy K Zoom, Galaxy Core, Galaxy Tab S 10.5, Galaxy S5 Mini, Galaxy Core 2, Galaxy S Duos 3, Galaxy Ace 4, Galaxy Star 2 Plus, Galaxy Mega 2, Galaxy Pocket 2, Galaxy Core Prime, Galaxy Grand Prime, Galaxy Alpha, Galaxy Young 2, Galaxy Note 4, Galaxy Note Edge, Galaxy A3 (2015), Galaxy A5 (2015) (released 2014), Galaxy Pocket Plus, Galaxy E7, Galaxy A7 (2015), Galaxy E5, Galaxy J1, Galaxy Xcover 3, Galaxy S6, Galaxy S6 Edge, Galaxy J7, Galaxy J5, Galaxy S6 Active, Galaxy V Plus, Galaxy Trend 2 Lite, Galaxy S5 Neo, Galaxy Note 5, Galaxy A8 (2015), Galaxy S6 Edge+, Galaxy J2, Galaxy J1 Ace, Galaxy A3 (2016), Galaxy A5 (2016), Galaxy A7 (2016), Galaxy A9 (2016), Galaxy J1 (2016), Galaxy S7, Galaxy S7 Edge, Galaxy J1 Mini, Galaxy A9 Pro (2016), Galaxy Tab A6, Galaxy J3 (2016), Galaxy J7 (2016), Galaxy J5 (2016), Galaxy C7, Galaxy C5, Galaxy Tab A 10.1 (2016), Galaxy J3 Pro, Galaxy S7 Active, Galaxy J2 Prime, Galaxy Note 7, Galaxy J7 Prime, Galaxy On7 (2016), Galaxy On5 Pro (2016), Galaxy On5 (2016), Galaxy A8 (2016), Galaxy C9 Pro, Galaxy J2 Prime, Galaxy J1 mini Prime/Galaxy V2, Galaxy C5 Pro, Galaxy A3 (2017), Galaxy A5 (2017), Galaxy A7 (2017), Galaxy Tab S3, Galaxy S8+, Galaxy S8, Galaxy Xcover 4, Galaxy J7 Max, Galaxy J7 Pro (2017), Galaxy J7 (2017), Galaxy J5 (2017), Galaxy J3 Prime, Galaxy J3 (2017), Galaxy Note Fan Edition (FE), Galaxy S8 Active, Galaxy Note 8, Galaxy J7+, Galaxy J7 Sky Pro, Galaxy J7 Nxt, Galaxy J7 V, Galaxy C8 / C7 (2017), Galaxy Tab A 8.0 (2017), Galaxy Tab Active 2, Galaxy J4 (2017), Galaxy A8+ (2018), Galaxy A8 (2018), Galaxy J4 Pro (2018), Galaxy S9+, Galaxy S9, Galaxy J7 Duo, Galaxy J6 (2018), Galaxy J4 (2018), Galaxy A6+ (2018), Galaxy A6 (2018), Galaxy J7 (2018), Galaxy On6, Galaxy J8 (2018), Galaxy Tab S4, Galaxy Tab A 10.5 (2018), Galaxy Note 9, Galaxy J6+, Galaxy J4+, Galaxy A7 (2018), Galaxy A9 (2018), Galaxy A6s, Galaxy A8+ (2018), Galaxy A8 (2018), Galaxy A8s, Galaxy M20, Galaxy M10, Galaxy M30, Galaxy Tab A 10.1 (2019), Galaxy Tab S5e, Galaxy A10, Galaxy A30, Galaxy A50, Galaxy S10e, Galaxy S10, Galaxy S10+, Galaxy A2 Core, Galaxy A20e, Galaxy A20, Galaxy A40, Galaxy A70, Galaxy A80, Galaxy A60, Galaxy View 2, Galaxy S10 5G, Galaxy M40, Galaxy Note 10+, Galaxy Note 10, Galaxy A10e, Galaxy A10s, Galaxy Fold, Galaxy A90 5G, Galaxy A30s, Galaxy A50s, Galaxy A70s, Galaxy M10s, Galaxy A20s, Galaxy M30s, Galaxy A51, Galaxy A71, Galaxy A01, Galaxy S10 Lite, Galaxy Note 10 Lite, Galaxy Xcover Pro, Galaxy Tab S6, Galaxy Tab S6 5G, Galaxy Z Flip, Galaxy M31, Galaxy A11, Galaxy M21, Galaxy A41, Galaxy A31, Galaxy M11, Galaxy S20 Ultra, Galaxy S20+, Galaxy S20, Galaxy Tab S6 Lite, Galaxy A21, Galaxy A51 5G, Galaxy A51 5G UW, Galaxy A71 5G, Galaxy A21s, Galaxy M01, Galaxy M01s, Galaxy A01 Core, Galaxy M31s, Galaxy Tab S7+, Galaxy Tab S7, Galaxy Z Flip 5G, Galaxy Note 20 Ultra, Galaxy Note 20 Ultra 5G, Galaxy Note 20, Galaxy M51, Galaxy Z Fold2 5G, Galaxy S20 FE, Galaxy S20 FE 5G, Galaxy S20 FE 2022, Galaxy F41, Galaxy A42 5G, Galaxy M21s, Galaxy A12, Galaxy A02s, Galaxy M02s, Galaxy A32 5G, Galaxy S21 Ultra, Galaxy S21+, Galaxy S21, Galaxy A02, Galaxy M02, Galaxy M12, Galaxy F62, Galaxy M62, Galaxy A32, Galaxy A52, Galaxy A52 5G, Galaxy A72, Galaxy F12, Galaxy F02s, Galaxy M42 5G, Galaxy F52 5G, Galaxy Tab A7 Lite, Galaxy Tab S7 FE, Galaxy A22, Galaxy A22 5G, Galaxy M32, Galaxy F22, Galaxy Z Flip3 5G, Galaxy Z Fold3 5G, Galaxy A52s 5G, Galaxy A03s, Galaxy M32 5G, Galaxy M22, Galaxy M52 5G, Galaxy F42 5G, Galaxy A03 Core, Galaxy A03, Galaxy Tab A8 10.5, Galaxy A13 5G, Galaxy S21 FE, Galaxy S22, Galaxy S22+, Galaxy S22 Ultra, Galaxy A13, Galaxy A23 5G, Galaxy A23, Galaxy F23, Galaxy A53 5G, Galaxy Tab S8, Galaxy Tab S8+, Galaxy Tab S8 Ultra, Galaxy A73 5G, Galaxy A33 5G, Galaxy M33 5G, Galaxy M23, Galaxy M53 5G, Galaxy F13, Galaxy M13, Galaxy M13 5G, Galaxy Xcover6 Pro, Galaxy Z Flip 4, Galaxy Z Fold 4, Galaxy Tab Active4 Pro, Galaxy A04s, Galaxy A04, Galaxy A04e, Galaxy Tab A7 10.4 (2022), Galaxy M04, Galaxy F04,

Galaxy A14 5G, Galaxy S23 Ultra, Galaxy S23+, Galaxy S23, Galaxy Xcover 5, Galaxy Tab A7, Galaxy Tab A7 10.4 (2020), Galaxy Tab A 8.0 (2019), Galaxy J3 (2018), and Galaxy Tab E.

Samsung televisions made, used, sold, offered for sale, or imported within six years of the filing of the date of the lawsuit comprising Knox functionality, Tizen functionality, and/or push messaging functionality, with chassis numbers including, but not limited to the following: MCWS1, QCQ800, QCQ900, G75NC, G85NC, G95SC, QCQ700, S90PC, LS03C QCQ80, QCQ80D, QCQ80TL, QCQ83, QCQ85, QCQ85D, QCQ85TL, QCQ88, QCQ8X, QCQ90, QCQ90D, QCQ90TL, QCQ95, QCQ95D, QCQ95TL, QCQ9X, QCQS90, QCQS90D, QCQS90TL, QCQS95, QCQS95D, QCQS95TL, QCQS9X, M70C, M80C, QCQ70, QAQ70, QAQ7A, QAQ7D, QCQ70D_NM2, QCQ70_NM2, QCQ7X_NM2, QTQ70, M50C, QCQ60, LSP3C, UCU7000, UCU8000TL_PML, UCU8000_PML, UCU800M_PML, UCU80MD_PML, UCU8000, QBQ900, QBQ850, QBQ800, QBQ100, MBWS1, G97NB, QBQ700, G85NB, G75NB, G95NB, LS04B, LS03B, QBQ75, QBQS95, QBQS90, QBQD90, QBQ9X, QBQ9D, QBQ95, QBQ90S, QBQ90, QBQ8D, QBQ85D, QBQ85, QBQ83, QBQ80, QBQ7X, QBQ70, QBQX3, LS01B, LS05B, G65B, G70B, G8QNB, M80B, G65B, G70B, G70NC, G85SB, LS01B_ML, LS05B_ML, QBQ70_ML, QBQ7X_ML, BQ80_ML, QBQ83_ML, QBQ85D_ML, QBQ85_ML, QBQ8D_ML, QBQ90_ML, QBQ9D_ML, QBQ9X_ML, QAQ70, QAQ7D, QAQ90, QBQ6D, QBQ63, QBQ60_DPP, QBQ60, M70BO, M70B, M50B, UAU8000_L, QAQ60_K, UAU850D_K65, UAU8000_K65, UAU8000_K, LS03BS, UBU7000, UBU8000, LSP3B, UBU8000_X, QAQ9X, QAQ9D, QAQ95, QAQ90_NS, QAQ90, QAQ8D, QAQ85_NS, QAQ85D, QAQ85, QAQ80_NS, QAQ80, QAQ7D, QAQ70_NS, QAQ70, LST5A, QAQ7A, LS03A_NS, LS03AP, LS03A, LS03APD, LS03AD, QAQ900, QAQ850, QAQ800, QAQ700_P, MAWS1, QAQ700, QAQ700_S, UAU9070, UAU9000, QAQ6D, QAQ60, UAU850D, UAU8000, LS05AL, QAQ6D_K, QAQ60_K, QAQ50_K, UAUE60A, UAU7500, UAU7000, UAUE70A, UAU850D_K, UAU8000_K, UAU7700, LSP3, BEA_HB, KTSU2EL_ATM, KTSU2EL_HKC, KTSU2EL_HKC, KTSU2EL_REF, KTSU2EL_TPO, KTSU2EL_TPO, QTQ800, QTQ800_NS, QTQ850, QTQ900, QTQ950, QTQ950_NS, LSR9, LST7T, QTQ70, QTQ70_NS, QTQ72, QTQ7D, QTQ7X, QTQ80, QTQ80_NS, QTQ8D, QTQ8E, QTQ90, QTQ90_NS, QTQ95, QTQ95_NS, LS05T, LS03T, LS03T_NS, LS01T, LS01T_NS, MTWS1, QTQ60, QTQ62, QTQ6D, QTQ6E, QTQ6X, UTU8500, UTU850D, UTU8510, UTU8570, UTU85A0, QTQ6AC, QTQ6SC, QTQ6XC, UTU8000, UTU800D, UTU8200, UTU8300, UTU8400, LS03TS, UTU7000, UTU700D, UTU7090, UT4310, UT4500, UT4700, UT5310, UT5500, UT5770, UT4300, UT4400, UT5300, UT430E, UT530E, QRQ900B, QRQ90, QRQ85_OC, QRQ80_OC, QRQ80, QRQ75S, QRQ75, QRQ70, QRQ6X, QRQ69, QRQ65A, QRQ60, LS03R, LS05R, LS01R, URU800D, URU8000, MLS07R, QRQ50S, QRQ50, URU7800, URU7700, URU74A0, URU7470, URU7450, URU7410, URU740D, URU7400, URU730D, URU7300, URU710D, URU7100, URU7790, URU77FA, URU7000, URU6900, URUF58T, RUF58T, UR6000, UR5500, UR4500, QRQ900, QNQ9S, QNQ9F, QNQ8FB, QNQ8F, QNQ8C, QNQ7FH, QNQ7F, QNQ7C, QNQ75F, QNQ75C, QNQ6FK, QNQ6F, QNQ65FB, QNQ65F, UNU850D, UNU8500, UNU80A0, UNU800D, UNU8000, UNU76A0, UNU7500, UNU74A0, UNU7450, UNU7400, ULS03NU, UNU730D, UNU7300, UNU710D, UNU7103, UNU7100, URU7000, UNU7120, UNU709D, UNU7090, UNU7080, UNU7050, UNU6950, UN5510, UN5500, UN5350, UN5305, UN5300, UN5200, UN4510, UN4500, UN4350, UN4310, UN4300, BERTB, BERTA, QMS9Y, QMQ9FR, QMQ9F, QMQ8CR, QMQ8C, QMQ7FVRE, QMQ7FRE, QMQ7FR, QMQ7FDR, QMQ7FD, QMQ7F, QMQ7CRE, QMQ7CR, QMQ7CDR,

QMQ7CD, QMQ7C, QMQ6FRE, UMQS9, UMU900R, UMU9000, UMU800R, UMU8000, UMU750R, UMU7500, UMU70AR, UMU70A0, UMU700R, UMU7000, UMU66A0, UMU6500, UMU64A0, UMU6470, UMU6400, UMLS003, ULS003U, UMU66AR, UMU650R, UMU64AR, UMU640R, UMU6303, UMU6302, UMU6300, UMU6310, UMU6320, UMU6103, UMU6102, UMU6100, UMU6070, UMU6000, UMU631E, UMU630E, UMU6303, UMU6302, UMU6300, UMU6503, UMU6502, UMU6500, UMU5523, UMU5522, UMU5520, UMU5513, UMU5512, UMU5510, UMU5503, UMU5502, UMU5500, UMU5300, UMU4500, UMU4300, TH39S, VF39S, UNU7000, UMU6100, or, alternatively model numbers in the following formats: QN***C, LS0*C, QN**C, S90C, S95C, Q**C, CU****, QN***B, LS0*B, QN**B, S90B, S95B, Q**B, BU****, QN***A, LS0*A, QN**A, Q**A, AU****, QN***T, LS0*T, QN**T, Q**T, TU****, QN***R, LS0*R, QN**R, Q**R, RU****, QN*FN, NU***, LS0*NU, Q7F, Q6F, MU***, U7000, MU6100.

Samsung wearables made, used, sold, offered for sale, or imported within six years of the filing of the date of the lawsuit comprising Knox functionality, Tizen functionality, and/or push messaging functionality including, but not limited to the following: SM-R800 (46mm), SM-R805 (46mm/Cellular), SM-R810 (42mm), SM-R815 (42mm/Cellular), SM-R855F, SM-845F (Global, LTE model) SM-R855U SM-R845U (USA, LTE model) SM-R850, SM-840 (Wi-Fi only), SM-R860 SM-R865 SM-R870 SM-R875 SM-R880 SM-R885 SM-R890 SM-R895, SM-R905 (40mm), SM-R915 (44mm), SM-R925 (45mm), SM-R930 (40mm/Wi-Fi), SM-R935 (40mm/LTE), SM-R940 (44mm/Wi-Fi), SM-R945 (44mm/LTE), SM-R950 (43mm/Wi-Fi), SM-R955 (43mm/LTE), SM-R960 (47mm/Wi-Fi), SM-R965 (47mm/LTE), SM-R500 (40mm), SM-R820 (44mm), SM-R825 (44mm/Cellular), SM-R830 (40mm), SM-R835 (40mm/Cellular).

The Samsung products in the preceding list, including all variations, editions, and applications of the foregoing, and all products and apparatuses of Samsung similar to the foregoing that include the claimed elements are the '733 Accused Instrumentalities.

U.S. PATENT NO. 9,198,117

Headwater accuses the following Samsung products which implement Samsung Knox, Tizen, and/or push messaging functionality (e.g., communicating with Google's Firebase Cloud Messaging service, Samsung's Push Service, Knox, or Tizen functionality) of infringing each of the Asserted Claims of the '117 patent:

Servers leased, owned, supported, and/or operated by Samsung comprising Knox functionality, Tizen functionality and/or push messaging functionality.

Samsung phones, tablets, and devices made, used, sold, offered for sale, or imported within six years of the filing of the date of the lawsuit comprising Knox functionality, Tizen functionality,

and/or push messaging functionality, including but not limited to the following: Galaxy S II Plus, Galaxy Grand, Galaxy Young, Galaxy Xcover 2, Galaxy S4, Galaxy Fame, Galaxy Mega, Galaxy Win, Galaxy Y Plus, Galaxy Core, Galaxy Star, Galaxy Pocket Neo, Galaxy Ace 3, Galaxy S4 Zoom, Galaxy S4 Active, Galaxy S4 Mini, Galaxy Gear, Galaxy Note 3, Galaxy Core Plus, Galaxy Light, Galaxy Fame Lite, Galaxy Trend Lite, Galaxy Round, Galaxy Express 2, Galaxy J, Galaxy Star Pro, Galaxy Grand 2, Galaxy Trend Plus, Galaxy S Duos 2, Galaxy J, Galaxy Win Pro (SM-G3812), Galaxy Grand Lite, Galaxy Grand Neo, Galaxy Note 3 Neo, Galaxy Win 2, Galaxy S3 Neo, Galaxy S5, Galaxy Ace Style, Galaxy K Zoom, Galaxy Core, Galaxy Tab S 10.5, Galaxy S5 Mini, Galaxy Core 2, Galaxy S Duos 3, Galaxy Ace 4, Galaxy Star 2 Plus, Galaxy Mega 2, Galaxy Pocket 2, Galaxy Core Prime, Galaxy Grand Prime, Galaxy Alpha, Galaxy Young 2, Galaxy Note 4, Galaxy Note Edge, Galaxy A3 (2015), Galaxy A5 (2015) (released 2014), Galaxy Pocket Plus, Galaxy E7, Galaxy A7 (2015), Galaxy E5, Galaxy J1, Galaxy Xcover 3, Galaxy S6, Galaxy S6 Edge, Galaxy J7, Galaxy J5, Galaxy S6 Active, Galaxy V Plus, Galaxy Trend 2 Lite, Galaxy S5 Neo, Galaxy Note 5, Galaxy A8 (2015), Galaxy S6 Edge+, Galaxy J2, Galaxy J1 Ace, Galaxy A3 (2016), Galaxy A5 (2016), Galaxy A7 (2016), Galaxy A9 (2016), Galaxy J1 (2016), Galaxy S7, Galaxy S7 Edge, Galaxy J1 Mini, Galaxy A9 Pro (2016), Galaxy Tab A6, Galaxy J3 (2016), Galaxy J7 (2016), Galaxy J5 (2016), Galaxy C7, Galaxy C5, Galaxy Tab A 10.1 (2016), Galaxy J3 Pro, Galaxy S7 Active, Galaxy J2 Prime, Galaxy Note 7, Galaxy J7 Prime, Galaxy On7 (2016), Galaxy On5 Pro (2016), Galaxy On5 (2016), Galaxy A8 (2016), Galaxy C9 Pro, Galaxy J2 Prime, Galaxy J1 mini Prime/Galaxy V2, Galaxy C5 Pro, Galaxy A3 (2017), Galaxy A5 (2017), Galaxy A7 (2017), Galaxy Tab S3, Galaxy S8+, Galaxy S8, Galaxy Xcover 4, Galaxy J7 Max, Galaxy J7 Pro (2017), Galaxy J7 (2017), Galaxy J5 (2017), Galaxy J3 Prime, Galaxy J3 (2017), Galaxy Note Fan Edition (FE), Galaxy S8 Active, Galaxy Note 8, Galaxy J7+, Galaxy J7 Sky Pro, Galaxy J7 Nxt, Galaxy J7 V, Galaxy C8 / C7 (2017), Galaxy Tab A 8.0 (2017), Galaxy Tab Active 2, Galaxy J4 (2017), Galaxy A8+ (2018), Galaxy A8 (2018), Galaxy J4 Pro (2018), Galaxy S9+, Galaxy S9, Galaxy J7 Duo, Galaxy J6 (2018), Galaxy J4 (2018), Galaxy A6+ (2018), Galaxy A6 (2018), Galaxy J7 (2018), Galaxy On6, Galaxy J8 (2018), Galaxy Tab S4, Galaxy Tab A 10.5 (2018), Galaxy Note 9, Galaxy J6+, Galaxy J4+, Galaxy A7 (2018), Galaxy A9 (2018), Galaxy A6s, Galaxy A8+ (2018), Galaxy A8 (2018), Galaxy A8s, Galaxy M20, Galaxy M10, Galaxy M30, Galaxy Tab A 10.1 (2019), Galaxy Tab S5e, Galaxy A10, Galaxy A30, Galaxy A50, Galaxy S10e, Galaxy S10, Galaxy S10+, Galaxy A2 Core, Galaxy A20e, Galaxy A20, Galaxy A40, Galaxy A70, Galaxy A80, Galaxy A60, Galaxy View 2, Galaxy S10 5G, Galaxy M40, Galaxy Note 10+, Galaxy Note 10, Galaxy A10e, Galaxy A10s, Galaxy Fold, Galaxy A90 5G, Galaxy A30s, Galaxy A50s, Galaxy A70s, Galaxy M10s, Galaxy A20s, Galaxy M30s, Galaxy A51, Galaxy A71, Galaxy A01, Galaxy S10 Lite, Galaxy Note 10 Lite, Galaxy Xcover Pro, Galaxy Tab S6, Galaxy Tab S6 5G, Galaxy Z Flip, Galaxy M31, Galaxy A11, Galaxy M21, Galaxy A41, Galaxy A31, Galaxy M11, Galaxy S20 Ultra, Galaxy S20+, Galaxy S20, Galaxy Tab S6 Lite, Galaxy A21, Galaxy A51 5G, Galaxy A51 5G UW, Galaxy A71 5G, Galaxy A21s, Galaxy M01, Galaxy M01s, Galaxy A01 Core, Galaxy M31s, Galaxy Tab S7+, Galaxy Tab S7, Galaxy Z Flip 5G, Galaxy Note 20 Ultra, Galaxy Note 20 Ultra 5G, Galaxy Note 20, Galaxy M51, Galaxy Z Fold2 5G, Galaxy S20 FE, Galaxy S20 FE 5G, Galaxy S20 FE 2022, Galaxy F41, Galaxy A42 5G, Galaxy M21s, Galaxy A12, Galaxy A02s, Galaxy M02s, Galaxy A32 5G, Galaxy S21 Ultra, Galaxy S21+, Galaxy S21, Galaxy A02, Galaxy M02, Galaxy M12, Galaxy F62, Galaxy M62, Galaxy A32, Galaxy A52, Galaxy A52 5G, Galaxy A72, Galaxy F12, Galaxy F02s, Galaxy M42 5G, Galaxy F52 5G, Galaxy Tab A7 Lite, Galaxy Tab S7 FE, Galaxy A22, Galaxy A22 5G, Galaxy M32, Galaxy F22, Galaxy Z Flip3 5G, Galaxy Z Fold3 5G, Galaxy A52s 5G, Galaxy A03s, Galaxy M32 5G, Galaxy M22, Galaxy M52

5G, Galaxy F42 5G, Galaxy A03 Core, Galaxy A03, Galaxy Tab A8 10.5, Galaxy A13 5G, Galaxy S21 FE, Galaxy S22, Galaxy S22+, Galaxy S22 Ultra, Galaxy A13, Galaxy A23 5G, Galaxy A23, Galaxy F23, Galaxy A53 5G, Galaxy Tab S8, Galaxy Tab S8+, Galaxy Tab S8 Ultra, Galaxy A73 5G, Galaxy A33 5G, Galaxy M33 5G, Galaxy M23, Galaxy M53 5G, Galaxy F13, Galaxy M13, Galaxy M13 5G, Galaxy Xcover6 Pro, Galaxy Z Flip 4, Galaxy Z Fold 4, Galaxy Tab Active4 Pro, Galaxy A04s, Galaxy A04, Galaxy A04e, Galaxy Tab A7 10.4 (2022), Galaxy M04, Galaxy F04, Galaxy A14 5G, Galaxy S23 Ultra, Galaxy S23+, Galaxy S23, Galaxy Xcover 5, Galaxy Tab A7, Galaxy Tab A7 10.4 (2020), Galaxy Tab A 8.0 (2019), Galaxy J3 (2018), and Galaxy Tab E.

Samsung televisions made, used, sold, offered for sale, or imported within six years of the filing of the date of the lawsuit comprising Knox functionality, Tizen functionality, and/or push messaging functionality, with chassis numbers including, but not limited to the following: MCWS1, QCQ800, QCQ900, G75NC, G85NC, G95SC, QCQ700, S90PC, LS03C QCQ80, QCQ80D, QCQ80TL, QCQ83, QCQ85, QCQ85D, QCQ85TL, QCQ88, QCQ8X, QCQ90, QCQ90D, QCQ90TL, QCQ95, QCQ95D, QCQ95TL, QCQ9X, QCQS90, QCQS90D, QCQS90TL, QCQS95, QCQS95D, QCQS95TL, QCQS9X, M70C, M80C, QCQ70, QAQ70, QAQ7A, QAQ7D, QCQ70D_NM2, QCQ70_NM2, QCQ7X_NM2, QTQ70, M50C, QCQ60, LSP3C, UCU7000, UCU8000TL_PML, UCU8000_PML, UCU800M_PML, UCU80MD_PML, UCU8000, QBQ900, QBQ850, QBQ800, QBQ100, MBWS1, G97NB, QBQ700, G85NB, G75NB, G95NB, LS04B, LS03B, QBQ75, QBQS95, QBQS90, QBQD90, QBQ9X, QBQ9D, QBQ95, QBQ90S, QBQ90, QBQ8D, QBQ85D, QBQ85, QBQ83, QBQ80, QBQ7X, QBQ70, QBQX3, LS01B, LS05B, G65B, G70B, G8QNB, M80B, G65B, G70B, G70NC, G85SB, LS01B_ML, LS05B_ML, QBQ70_ML, QBQ7X_ML, BQ80_ML, QBQ83_ML, QBQ85D_ML, QBQ85_ML, QBQ8D_ML, QBQ90_ML, QBQ9D_ML, QBQ9X_ML, QAQ70, QAQ7D, QAQ90, QBQ6D, QBQ63, QBQ60_DPP, QBQ60, M70BO, M70B, M50B, UAU8000_L, QAQ60_K, UAU850D_K65, UAU8000_K65, UAU8000_K, LS03BS, UBU7000, UBU8000, LSP3B, UBU8000_X, QAQ9X, QAQ9D, QAQ95, QAQ90_NS, QAQ90, QAQ8D, QAQ85_NS, QAQ85D, QAQ85, QAQ80_NS, QAQ80, QAQ7D, QAQ70_NS, QAQ70, LST5A, QAQ7A, LS03A_NS, LS03AP, LS03A, LS03APD, LS03AD, QAQ900, QAQ850, QAQ800, QAQ700_P, MAWS1, QAQ700, QAQ700_S, UAU9070, UAU9000, QAQ6D, QAQ60, UAU850D, UAU8000, LS05AL, QAQ6D_K, QAQ60_K, QAQ50_K, UAUE60A, UAU7500, UAU7000, UAUE70A, UAU850D_K, UAU8000_K, UAU7700, LSP3, BEA_HB, KTSU2EL_ATM, KTSU2EL_HKC, KTSU2EL_HKC, KTSU2EL_REF, KTSU2EL_TPO, KTSU2EL_TPO, QTQ800, QTQ800_NS, QTQ850, QTQ900, QTQ950, QTQ950_NS, LSR9, LST7T, QTQ70, QTQ70_NS, QTQ72, QTQ7D, QTQ7X, QTQ80, QTQ80_NS, QTQ8D, QTQ8E, QTQ90, QTQ90_NS, QTQ95, QTQ95_NS, LS05T, LS03T, LS03T_NS, LS01T, LS01T_NS, MTWS1, QTQ60, QTQ62, QTQ6D, QTQ6E, QTQ6X, UTU8500, UTU850D, UTU8510, UTU8570, UTU85A0, QTQ6AC, QTQ6SC, QTQ6XC, UTU8000, UTU800D, UTU8200, UTU8300, UTU8400, LS03TS, UTU7000, UTU700D, UTU7090, UT4310, UT4500, UT4700, UT5310, UT5500, UT5770, UT4300, UT4400, UT5300, UT430E, UT530E, QRR900B, QRR90, QRR85_OC, QRR80_OC, QRR80, QRR75S, QRR75, QRR70, QRR6X, QRR69, QRR65A, QRR60, LS03R, LS05R, LS01R, URU800D, URU8000, MLS07R, QRR50S, QRR50, URU7800, URU7700, URU74A0, URU7470, URU7450, URU7410, URU740D, URU7400, URU730D, URU7300, URU710D, URU7100, URU7790, URU77FA, URU7000, URU6900, URUF58T, RUF58T, UR6000, UR5500, UR4500, QRR900, QNQ9S, QNQ9F, QNQ8FB, QNQ8F, QNQ8C, QNQ7FH, QNQ7F, QNQ7C, QNQ75F, QNQ75C, QNQ6FK, QNQ6F, QNQ65FB,

QNNQ65F, UNU850D, UNU8500, UNU80A0, UNU800D, UNU8000, UNU76A0, UNU7500, UNU74A0, UNU7450, UNU7400, ULS03NU, UNU730D, UNU7300, UNU710D, UNU7103, UNU7100, URU7000, UNU7120, UNU709D, UNU7090, UNU7080, UNU7050, UNU6950, UN5510, UN5500, UN5350, UN5305, UN5300, UN5200, UN4510, UN4500, UN4350, UN4310, UN4300, BERTB, BERTA, QMS9Y, QMQ9FR, QMQ9F, QMQ8CR, QMQ8C, QMQ7FVRE, QMQ7FRE, QMQ7FR, QMQ7FDR, QMQ7FD, QMQ7F, QMQ7CRE, QMQ7CR, QMQ7CDR, QMQ7CD, QMQ7C, QMQ6FRE, UMQS9, UMU900R, UMU9000, UMU800R, UMU8000, UMU750R, UMU7500, UMU70AR, UMU70A0, UMU700R, UMU7000, UMU66A0, UMU6500, UMU64A0, UMU6470, UMU6400, UMLS003, ULS003U, UMU66AR, UMU650R, UMU64AR, UMU640R, UMU6303, UMU6302, UMU6300, UMU6310, UMU6320, UMU6103, UMU6102, UMU6100, UMU6070, UMU6000, UMF31E, UMF30E, UM6303, UM6302, UM6300, UM5603, UM5602, UM5600, UM5523, UM5522, UM5520, UM5513, UM5512, UM5510, UM5503, UM5502, UM5500, UM5300, UM4500, UM4300, TH39S, VF39S, UNU7000, UMU6100, or, alternatively model numbers in the following formats: QN***C, LS0*C, QN**C, S90C, S95C, Q**C, CU****, QN***B, LS0*B, QN**B, S90B, S95B, Q**B, BU****, QN***A, LS0*A, QN**A, Q**A, AU****, QN***T, LS0*T, QN**T, Q**T, TU****, QN***R, LS0*R, QN**R, Q**R, RU****, QN*FN, NU***, LS0*NU, Q7F, Q6F, MU***, U7000, MU6100.

Samsung wearables made, used, sold, offered for sale, or imported within six years of the filing of the date of the lawsuit comprising Knox functionality, Tizen functionality, and/or push messaging functionality including, but not limited to the following: SM-R800 (46mm), SM-R805 (46mm/Cellular), SM-R810 (42mm), SM-R815 (42mm/Cellular), SM-R855F, SM-845F (Global, LTE model) SM-R855U SM-R845U (USA, LTE model) SM-R850, SM-840 (Wi-Fi only), SM-R860 SM-R865 SM-R870 SM-R875 SM-R880 SM-R885 SM-R890 SM-R895, SM-R905 (40mm), SM-R915 (44mm), SM-R925 (45mm), SM-R930 (40mm/Wi-Fi), SM-R935 (40mm/LTE), SM-R940 (44mm/Wi-Fi), SM-R945 (44mm/LTE), SM-R950 (43mm/Wi-Fi), SM-R955 (43mm/LTE), SM-R960 (47mm/Wi-Fi), SM-R965 (47mm/LTE), SM-R500 (40mm), SM-R820 (44mm), SM-R825 (44mm/Cellular), SM-R830 (40mm), SM-R835 (40mm/Cellular).

The Samsung products in the preceding list, including all variations, editions, and applications of the foregoing, and all products and apparatuses of Samsung similar to the foregoing that include the claimed elements are the '117 Accused Instrumentalities.

U.S. PATENT NO. 9,615,192

Headwater accuses the following Samsung products which implement Samsung Knox, Tizen, and/or push messaging functionality (e.g., communicating with Google's Firebase Cloud Messaging service, Samsung's Push Service, Knox, or Tizen functionality) of infringing each of the Asserted Claims of the '192 patent:

Servers leased, owned, supported, and/or operated by Samsung comprising Knox functionality, Tizen functionality and/or push messaging functionality.

Samsung phones, tablets, and devices made, used, sold, offered for sale, or imported within six years of the filing of the date of the lawsuit comprising Knox functionality, Tizen functionality, and/or push messaging functionality, including but not limited to the following: Galaxy S II Plus, Galaxy Grand, Galaxy Young, Galaxy Xcover 2, Galaxy S4, Galaxy Fame, Galaxy Mega, Galaxy Win, Galaxy Y Plus, Galaxy Core, Galaxy Star, Galaxy Pocket Neo, Galaxy Ace 3, Galaxy S4 Zoom, Galaxy S4 Active, Galaxy S4 Mini, Galaxy Gear, Galaxy Note 3, Galaxy Core Plus, Galaxy Light, Galaxy Fame Lite, Galaxy Trend Lite, Galaxy Round, Galaxy Express 2, Galaxy J, Galaxy Star Pro, Galaxy Grand 2, Galaxy Trend Plus, Galaxy S Duos 2, Galaxy J, Galaxy Win Pro (SM-G3812), Galaxy Grand Lite, Galaxy Grand Neo, Galaxy Note 3 Neo, Galaxy Win 2, Galaxy S3 Neo, Galaxy S5, Galaxy Ace Style, Galaxy K Zoom, Galaxy Core, Galaxy Tab S 10.5, Galaxy S5 Mini, Galaxy Core 2, Galaxy S Duos 3, Galaxy Ace 4, Galaxy Star 2 Plus, Galaxy Mega 2, Galaxy Pocket 2, Galaxy Core Prime, Galaxy Grand Prime, Galaxy Alpha, Galaxy Young 2, Galaxy Note 4, Galaxy Note Edge, Galaxy A3 (2015), Galaxy A5 (2015) (released 2014), Galaxy Pocket Plus, Galaxy E7, Galaxy A7 (2015), Galaxy E5, Galaxy J1, Galaxy Xcover 3, Galaxy S6, Galaxy S6 Edge, Galaxy J7, Galaxy J5, Galaxy S6 Active, Galaxy V Plus, Galaxy Trend 2 Lite, Galaxy S5 Neo, Galaxy Note 5, Galaxy A8 (2015), Galaxy S6 Edge+, Galaxy J2, Galaxy J1 Ace, Galaxy A3 (2016), Galaxy A5 (2016), Galaxy A7 (2016), Galaxy A9 (2016), Galaxy J1 (2016), Galaxy S7, Galaxy S7 Edge, Galaxy J1 Mini, Galaxy A9 Pro (2016), Galaxy Tab A6, Galaxy J3 (2016), Galaxy J7 (2016), Galaxy J5 (2016), Galaxy C7, Galaxy C5, Galaxy Tab A 10.1 (2016), Galaxy J3 Pro, Galaxy S7 Active, Galaxy J2 Prime, Galaxy Note 7, Galaxy J7 Prime, Galaxy On7 (2016), Galaxy On5 Pro (2016), Galaxy On5 (2016), Galaxy A8 (2016), Galaxy C9 Pro, Galaxy J2 Prime, Galaxy J1 mini Prime/Galaxy V2, Galaxy C5 Pro, Galaxy A3 (2017), Galaxy A5 (2017), Galaxy A7 (2017), Galaxy Tab S3, Galaxy S8+, Galaxy S8, Galaxy Xcover 4, Galaxy J7 Max, Galaxy J7 Pro (2017), Galaxy J7 (2017), Galaxy J5 (2017), Galaxy J3 Prime, Galaxy J3 (2017), Galaxy Note Fan Edition (FE), Galaxy S8 Active, Galaxy Note 8, Galaxy J7+, Galaxy J7 Sky Pro, Galaxy J7 Nxt, Galaxy J7 V, Galaxy C8 / C7 (2017), Galaxy Tab A 8.0 (2017), Galaxy Tab Active 2, Galaxy J4 (2017), Galaxy A8+ (2018), Galaxy A8 (2018), Galaxy J4 Pro (2018), Galaxy S9+, Galaxy S9, Galaxy J7 Duo, Galaxy J6 (2018), Galaxy J4 (2018), Galaxy A6+ (2018), Galaxy A6 (2018), Galaxy J7 (2018), Galaxy On6, Galaxy J8 (2018), Galaxy Tab S4, Galaxy Tab A 10.5 (2018), Galaxy Note 9, Galaxy J6+, Galaxy J4+, Galaxy A7 (2018), Galaxy A9 (2018), Galaxy A6s, Galaxy A8+ (2018), Galaxy A8 (2018), Galaxy A8s, Galaxy M20, Galaxy M10, Galaxy M30, Galaxy Tab A 10.1 (2019), Galaxy Tab S5e, Galaxy A10, Galaxy A30, Galaxy A50, Galaxy S10e, Galaxy S10, Galaxy S10+, Galaxy A2 Core, Galaxy A20e, Galaxy A20, Galaxy A40, Galaxy A70, Galaxy A80, Galaxy A60, Galaxy View 2, Galaxy S10 5G, Galaxy M40, Galaxy Note 10+, Galaxy Note 10, Galaxy A10e, Galaxy A10s, Galaxy Fold, Galaxy A90 5G, Galaxy A30s, Galaxy A50s, Galaxy A70s, Galaxy M10s, Galaxy A20s, Galaxy M30s, Galaxy A51, Galaxy A71, Galaxy A01, Galaxy S10 Lite, Galaxy Note 10 Lite, Galaxy Xcover Pro, Galaxy Tab S6, Galaxy Tab S6 5G, Galaxy Z Flip, Galaxy M31, Galaxy A11, Galaxy M21, Galaxy A41, Galaxy A31, Galaxy M11, Galaxy S20 Ultra, Galaxy S20+, Galaxy S20, Galaxy Tab S6 Lite, Galaxy A21, Galaxy A51 5G, Galaxy A51 5G UW, Galaxy A71 5G, Galaxy A21s, Galaxy M01, Galaxy M01s, Galaxy A01 Core, Galaxy M31s, Galaxy Tab S7+, Galaxy Tab S7, Galaxy Z Flip 5G, Galaxy Note 20 Ultra, Galaxy Note 20 Ultra 5G, Galaxy Note 20, Galaxy M51, Galaxy Z Fold2 5G, Galaxy S20 FE, Galaxy S20 FE 5G, Galaxy S20 FE 2022, Galaxy F41, Galaxy A42 5G, Galaxy M21s, Galaxy A12, Galaxy

A02s, Galaxy M02s, Galaxy A32 5G, Galaxy S21 Ultra, Galaxy S21+, Galaxy S21, Galaxy A02, Galaxy M02, Galaxy M12, Galaxy F62, Galaxy M62, Galaxy A32, Galaxy A52, Galaxy A52 5G, Galaxy A72, Galaxy F12, Galaxy F02s, Galaxy M42 5G, Galaxy F52 5G, Galaxy Tab A7 Lite, Galaxy Tab S7 FE, Galaxy A22, Galaxy A22 5G, Galaxy M32, Galaxy F22, Galaxy Z Flip3 5G, Galaxy Z Fold3 5G, Galaxy A52s 5G, Galaxy A03s, Galaxy M32 5G, Galaxy M22, Galaxy M52 5G, Galaxy F42 5G, Galaxy A03 Core, Galaxy A03, Galaxy Tab A8 10.5, Galaxy A13 5G, Galaxy S21 FE, Galaxy S22, Galaxy S22+, Galaxy S22 Ultra, Galaxy A13, Galaxy A23 5G, Galaxy A23, Galaxy F23, Galaxy A53 5G, Galaxy Tab S8, Galaxy Tab S8+, Galaxy Tab S8 Ultra, Galaxy A73 5G, Galaxy A33 5G, Galaxy M33 5G, Galaxy M23, Galaxy M53 5G, Galaxy F13, Galaxy M13, Galaxy M13 5G, Galaxy Xcover6 Pro, Galaxy Z Flip 4, Galaxy Z Fold 4, Galaxy Tab Active4 Pro, Galaxy A04s, Galaxy A04, Galaxy A04e, Galaxy Tab A7 10.4 (2022), Galaxy M04, Galaxy F04, Galaxy A14 5G, Galaxy S23 Ultra, Galaxy S23+, Galaxy S23, Galaxy Xcover 5, Galaxy Tab A7, Galaxy Tab A7 10.4 (2020), Galaxy Tab A 8.0 (2019), Galaxy J3 (2018), and Galaxy Tab E.

Samsung televisions made, used, sold, offered for sale, or imported within six years of the filing of the date of the lawsuit comprising Knox functionality, Tizen functionality, and/or push messaging functionality, with chassis numbers including, but not limited to the following: MCWS1, QCQ800, QCQ900, G75NC, G85NC, G95SC, QCQ700, S90PC, LS03C QCQ80, QCQ80D, QCQ80TL, QCQ83, QCQ85, QCQ85D, QCQ85TL, QCQ88, QCQ8X, QCQ90, QCQ90D, QCQ90TL, QCQ95, QCQ95D, QCQ95TL, QCQ9X, QCQS90, QCQS90D, QCQS90TL, QCQS95, QCQS95D, QCQS95TL, QCQS9X, M70C, M80C, QCQ70, QAQ70, QAQ7A, QAQ7D, QCQ70D_NM2, QCQ70_NM2, QCQ7X_NM2, QTQ70, M50C, QCQ60, LSP3C, UCU7000, UCU8000TL_PML, UCU8000_PML, UCU800M_PML, UCU80MD_PML, UCU8000, QBQ900, QBQ850, QBQ800, QBQ100, MBWS1, G97NB, QBQ700, G85NB, G75NB, G95NB, LS04B, LS03B, QBQ75, QBQS95, QBQS90, QBQD90, QBQ9X, QBQ9D, QBQ95, QBQ90S, QBQ90, QBQ8D, QBQ85D, QBQ85, QBQ83, QBQ80, QBQ7X, QBQ70, QBQX3, LS01B, LS05B, G65B, G70B, G8QNB, M80B, G65B, G70B, G70NC, G85SB, LS01B_ML, LS05B_ML, QBQ70_ML, QBQ7X_ML, BQ80_ML, QBQ83_ML, QBQ85D_ML, QBQ85_ML, QBQ8D_ML, QBQ90_ML, QBQ9D_ML, QBQ9X_ML, QAQ70, QAQ7D, QAQ90, QBQ6D, QBQ63, QBQ60_DPP, QBQ60, M70BO, M70B, M50B, UAU8000_L, QAQ60_K, UAU850D_K65, UAU8000_K65, UAU8000_K, LS03BS, UBU7000, UBU8000, LSP3B, UBU8000_X, QAQ9X, QAQ9D, QAQ95, QAQ90_NS, QAQ90, QAQ8D, QAQ85_NS, QAQ85D, QAQ85, QAQ80_NS, QAQ80, QAQ7D, QAQ70_NS, QAQ70, LST5A, QAQ7A, LS03A_NS, LS03AP, LS03A, LS03APD, LS03AD, QAQ900, QAQ850, QAQ800, QAQ700_P, MAWS1, QAQ700, QAQ700_S, UAU9070, UAU9000, QAQ6D, QAQ60, UAU850D, UAU8000, LS05AL, QAQ6D_K, QAQ60_K, QAQ50_K, UAUE60A, UAU7500, UAU7000, UAUE70A, UAU850D_K, UAU8000_K, UAU7700, LSP3, BEA_HB, KTSU2EL_ATM, KTSU2EL_HKC, KTSU2EL_HKC, KTSU2EL_REF, KTSU2EL_TPO, KTSU2EL_TPO, QTQ800, QTQ800_NS, QTQ850, QTQ900, QTQ950, QTQ950_NS, LSR9, LST7T, QTQ70, QTQ70_NS, QTQ72, QTQ7D, QTQ7X, QTQ80, QTQ80_NS, QTQ8D, QTQ8E, QTQ90, QTQ90_NS, QTQ95, QTQ95_NS, LS05T, LS03T, LS03T_NS, LS01T, LS01T_NS, MTWS1, QTQ60, QTQ62, QTQ6D, QTQ6E, QTQ6X, UTU8500, UTU850D, UTU8510, UTU8570, UTU85A0, QTQ6AC, QTQ6SC, QTQ6XC, UTU8000, UTU800D, UTU8200, UTU8300, UTU8400, LS03TS, UTU7000, UTU700D, UTU7090, UT4310, UT4500, UT4700, UT5310, UT5500, UT5770, UT4300, UT4400, UT5300, UT430E, UT530E, QRQ900B, QRQ90, QRQ85_OC, QRQ80_OC, QRQ80, QRQ75S, QRQ75, QRQ70, QRQ6X, QRQ69, QRQ65A,

QRQ60, LS03R, LS05R, LS01R, URU800D, URU8000, MLS07R, QRQ50S, QRQ50, URU7800, URU7700, URU74A0, URU7470, URU7450, URU7410, URU740D, URU7400, URU730D, URU7300, URU710D, URU7100, URU7790, URU77FA, URU7000, URU6900, URUF58T, RUF58T, UR6000, UR5500, UR4500, QRQ900, QNQ9S, QNQ9F, QNQ8FB, QNQ8F, QNQ8C, QNQ7FH, QNQ7F, QNQ7C, QNQ75F, QNQ75C, QNQ6FK, QNQ6F, QNQ65FB, QNQ65F, UNU850D, UNU8500, UNU80A0, UNU800D, UNU8000, UNU76A0, UNU7500, UNU74A0, UNU7450, UNU7400, ULS03NU, UNU730D, UNU7300, UNU710D, UNU7103, UNU7100, URU7000, UNU7120, UNU709D, UNU7090, UNU7080, UNU7050, UNU6950, UN5510, UN5500, UN5350, UN5305, UN5300, UN5200, UN4510, UN4500, UN4350, UN4310, UN4300, BERTB, BERTA, QMS9Y, QMQ9FR, QMQ9F, QMQ8CR, QMQ8C, QMQ7FVRE, QMQ7FRE, QMQ7FR, QMQ7FDR, QMQ7FD, QMQ7F, QMQ7CRE, QMQ7CR, QMQ7CDR, QMQ7CD, QMQ7C, QMQ6FRE, UMQS9, UMU900R, UMU9000, UMU800R, UMU8000, UMU750R, UMU7500, UMU70AR, UMU70A0, UMU700R, UMU7000, UMU66A0, UMU6500, UMU64A0, UMU6470, UMU6400, UMLS003, ULS003U, UMU66AR, UMU650R, UMU64AR, UMU640R, UMU6303, UMU6302, UMU6300, UMU6310, UMU6320, UMU6103, UMU6102, UMU6100, UMU6070, UMU6000, UMUF31E, UMUF30E, UM6303, UM6302, UM6300, UM5603, UM5602, UM5600, UM5523, UM5522, UM5520, UM5513, UM5512, UM5510, UM5503, UM5502, UM5500, UM5300, UM4500, UM4300, TH39S, VF39S, UNU7000, UMU6100, or, alternatively model numbers in the following formats: QN***C, LS0*C, QN**C, S90C, S95C, Q**C, CU****, QN***B, LS0*B, QN**B, S90B, S95B, Q**B, BU****, QN***A, LS0*A, QN**A, Q**A, AU****, QN***T, LS0*T, QN**T, Q**T, TU****, QN***R, LS0*R, QN**R, Q**R, RU****, QN*FN, NU***, LS0*NU, Q7F, Q6F, MU***, U7000, MU6100.

Samsung wearables made, used, sold, offered for sale, or imported within six years of the filing of the date of the lawsuit comprising Knox functionality, Tizen functionality, and/or push messaging functionality including, but not limited to the following: SM-R800 (46mm), SM-R805 (46mm/Cellular), SM-R810 (42mm), SM-R815 (42mm/Cellular), SM-R855F, SM-845F (Global, LTE model) SM-R855U SM-R845U (USA, LTE model) SM-R850, SM-840 (Wi-Fi only), SM-R860 SM-R865 SM-R870 SM-R875 SM-R880 SM-R885 SM-R890 SM-R895, SM-R905 (40mm), SM-R915 (44mm), SM-R925 (45mm), SM-R930 (40mm/Wi-Fi), SM-R935 (40mm/LTE), SM-R940 (44mm/Wi-Fi), SM-R945 (44mm/LTE), SM-R950 (43mm/Wi-Fi), SM-R955 (43mm/LTE), SM-R960 (47mm/Wi-Fi), SM-R965 (47mm/LTE), SM-R500 (40mm), SM-R820 (44mm), SM-R825 (44mm/Cellular), SM-R830 (40mm), SM-R835 (40mm/Cellular).

The Samsung products in the preceding list, including all variations, editions, and applications of the foregoing, and all products and apparatuses of Samsung similar to the foregoing that include the claimed elements are the '192 Accused Instrumentalities.

P.R. 3-1(C): CLAIM CHARTS

Headwater's analysis of Samsung's products and apparatuses is based upon information that is publicly available and based on Headwater's own investigation prior to any discovery in this action.

While the publicly available information constitutes evidence of the methods and apparatuses used by Headwater in the Accused Instrumentalities, direct evidence of the actual apparatuses and methods are at times not publicly available. Accordingly, these infringement contentions are based on the available public information, analysis, and reasonable inferences drawn from that information.

Headwater reserves the right to amend or supplement these disclosures for any of the following reasons (along with any other reason that may be permitted under the court's rules and orders):

- (1) Samsung provides evidence of the apparatuses and methods used in the Accused Instrumentalities;
- (2) The Asserted Claims may include elements that involve features that are implemented by hardware structures and logic and Headwater's current positions on infringement are set forth without the benefit of access to Samsung's source code, schematics, drawings, or other proprietary specifications or information, which cannot be obtained through publicly available information, for the Accused Instrumentalities. Therefore, it may be necessary for Headwater to supplement its positions on infringement after a complete production of such proprietary specifications or information by Samsung;
- (3) Headwater's position on infringement of specific claims will depend on the claim constructions adopted by the Court. Because said constructions have not yet occurred,

Headwater cannot take a final position on the bases for infringement of the Asserted Claims; and

- (4) Headwater's investigation and analysis of Samsung's Accused Instrumentalities are based upon information made publicly available by Samsung and by Headwater's own investigations. Headwater reserves the right to amend these contentions based upon discovery of non-public information that Headwater anticipates receiving from Samsung during discovery.

Attached as Exhibits A through C, and incorporated herein in their entirety, are charts identifying where each element of the Asserted Claims of the '733, '117, and '192 patents are found in the Accused Instrumentalities.

Unless otherwise indicated, the information provided that corresponds to each claim element is considered to indicate that each claim element is found within each of the different variations, versions, editions, and applications of each respective Accused Instrumentalities.

P.R. 3-1(D): LITERAL INFRINGEMENT AND DOCTRINE OF EQUIVALENTS

With respect to the patents at issue, Headwater contends that each element of each Asserted Claim is literally present. To the extent that Samsung identifies elements of the Asserted Claims that it contends are not literally present in the Accused Instrumentalities, Headwater contends that such elements are present under the doctrine of equivalents.

P.R. 3-1(E): PRIORITY DATES

<i>U.S. Patent No.</i>	<i>Priority Date</i>
8,406,733	January 28, 2009
9,198,117	January 28, 2009
9,615,192	January 28, 2009

P.R. 3-1(F): IDENTIFICATION OF INSTRUMENTALITIES PRACTICING THE CLAIMED INVENTION

The ItsOn software may incorporate or reflect the claims of the Asserted Patents. Headwater reserves the right to supplement this response should further investigation, discovery, or the court's claim construction rulings make such supplementation appropriate.

P.R. 3-2: DOCUMENT PRODUCTION ACCOMPANYING DISCLOSURE

P.R. 3-2(A) DOCUMENTS

Headwater is presently unaware of any documents that evidence any discussion with, disclosure to, or other manner of providing to a third party, or sale of or offer to sell, any of the inventions claimed in the patents in suit prior to their respective application dates.

A diligent search continues for documents, and Headwater reserves the right to supplement this response.

P.R. 3-2(B) DOCUMENTS

Headwater is presently unaware of any documents that evidence the conception, reduction to practice, design, or development of the claimed inventions, which were created on or before the application dates of the patents in suit or priority date identified pursuant to P.R. 3-1(e).

A diligent search continues for documents, and Headwater reserves the right to supplement this response.

P.R. 3-2(C) DOCUMENTS

The file histories for the '733, '117, and '192 patents may be found in Headwater's production.

Date: September 28, 2023

/s/ Marc Fenster

Marc Fenster
CA State Bar No. 181067
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CERTIFICATE OF SERVICE

I certify that this document is being served upon counsel of record for Defendants on September 28, 2023 via electronic mail.

/s/ Marc Fenster
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